

**CLAIMS**

1. A liquid-vapour distribution device for use in two-phase concurrent down-flow vessels, comprising:

5 a level, horizontal tray being perforated with holes, each perforation through the horizontal tray being fitted with a vapour lift tube,

the vapour lift tube consists of at least one elongated up-flow leg and one down-flow leg creating at least  
10 one up-flow zone and a down-flow zone between the up-flow zone and down-flow zone, the improvement of which comprises a bluff body being arranged within the transition zone and/or in a region of the up-flow or down-flow zone adjacent to the transition zone of the vapour lift tube.

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2.. The liquid-vapour distribution device of claim 1, wherein the bluff body is formed as a guide vane curving towards the legs of the vapour lift tube.

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3. The liquid-vapour distribution device of claim 1, wherein the bluff body is formed as a fairing.

4. The liquid-vapour distribution device of claim 3, wherein one or more fairings are arranged on the down-flow  
25 leg adjacent to the transition zone of the tube.

5. The liquid-vapour distribution device of claim 1, wherein the bluff body is formed as an impingement